

REMARKS

Claims 1-9 are pending. Claims 8 and 9 have been withdrawn from consideration as drawn to non-elected subject matter. Claims 1-7 are at issue. No new matter is added in this response.

Rejection under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejects Claims 1-2 and 4-7 under 35 U.S.C. § 103(a) as being obvious over Kley (U.S. Patent No. 7,309,446) (hereinafter “Kley”) in view of Linares (U.S. Patent Application Publication No. 2003/0205190) (hereinafter “Linares”). Claim 3 was rejected as being unpatentable over Kley in view of Linares and in further view of Pope (U.S. Patent Application Publication No. 2004/01992620) (hereinafter “Pope”). The Examiner contends that the declaration submitted with the August 21, 2009 Response (i.e., the Second Declaration of Jae Kap Lee and Phillip John) does not place the application in condition for allowance since the inventors have not shown diligence for the entire period from the conception of the invention through the filing date of the Korean priority application. According to the Examiner, applicant does not make it clear what date they are claiming for their invention. The Examiner also contends that the following time periods are unaccounted for in the Exhibits submitted with the declaration filed March 11, 2009 (i.e., the first Declaration of Jae Kap Lee and Phillip John):

- (i) from conception to May 2004;
- (ii) from May 2004 to July 2004; and
- (iii) from July 2004 to October 2004.

These rejections are respectfully traversed.

Conception

The Examiner states that “applicant does not make it clear what date they are claiming for their invention” and points out that Exhibits 1-2, 5 – 6, and 9- 10 submitted March 11, 2009 are undated. As previously stated, the dates were redacted from Exhibits 1 -2 (see first Declaration submitted March 11, 2009) and the inventors stated that the invention occurred prior to February 25, 2004. As stated in the MPEP:

When alleging that conception or a reduction to practice occurred prior to the effective date of the reference, the dates in the oath or declaration may be the actual dates or, if the applicant or patent owner does not desire to disclose his or her actual dates, he or she may merely allege that the acts referred to occurred prior to a specified date. (MPEP 715.07 (II)).

averments made in a 37 CFR 1.131 affidavit or declaration do not require corroboration; an applicant may stand on his or her own affidavit or declaration if he or she so elects. *Ex parte Hook*, 102 USPQ 130 (Bd. App. 1953). (MPEP 715.07 (III)).

Thus, the statement from the inventors as provided in the inventor Declaration and reproduced below is sufficient to show that the conception occurred prior to the Kley priority date.

2. Prior to Feb. 25. 2004, the filing date of the earliest provisional application to which the Kley patent (U.S. Patent No. 7,309,446) claims priority (U.S. Pat. Appl. Ser. No. 60/547,934), we had conceived our invention as described and claimed in the subject application in the United Kingdom, a WTO member nation since January 1995.

Conception prior to February 25, 2004 has been established.

The Examiner is incorrect in requiring proof of diligence dating back to conception. It is only necessary to establish that conception occurred at some point before the earliest priority date of Kley (stated to be March 29, 2004) followed by due diligence. *See* 37 C.F.R. §1.131(b) ("The showing of facts shall ... establish ... conception of the invention prior to the effective date of the reference coupled with due diligence from prior to said date to a subsequent reduction to practice") (*emphasis added*). The rules do not require a showing of diligence from applicants conception to the effective date of the reference. Thus, the first period for showing diligence should be from prior to March 29, 2004 to May 2005. In an abundance of caution, Applicants have attested to a conception date prior to the February 25, 2004 filing of the first Kley provisional application (Appl. No. 60/547,934). The '934 application was filed over one month prior to the sixth Kley provisional application (Appl. No. 60/557,786) filed March 29, 2004.

Diligence from prior to Feb. 25, 2004 to October 19, 2004

Since conception prior to February 25, 2004 has been shown, the only remaining requirement is a showing of due diligence from this date to the constructive reduction to practice on October 19, 2004. The Examiner agrees that Applicants have provided proof of diligence for May 2004 and July 2004, but requires further proof of diligence. Applicants contend this has been done in the prior declaration (see Para. 2 as reproduced above). With regard to overcoming a reference which was asserted to be prior art under § 102/103(a), the courts have found that the “evidentiary standard for antedating a reference is not the same as the PTO requirement for establishing priority in an interference contest. Inventors' affidavits have always been admissible to antedate a reference.” *Loral Fairchild Corp. v. Matsushita Elec.*, 266 F. 3d 1358 (Fed. Cir. 2001). Additionally, reasonable diligence is all that is required of the attorney. Reasonable diligence is established if attorney worked reasonably hard on the application during the continuous critical period. For example, if the attorney has a reasonable backlog of unrelated cases which he takes up in chronological order and carries out expeditiously, that is sufficient. (MPEP 2138.06 citing *Bey v. Kollonitsch*, 866 F.2d 1024, 231 USPQ 967 (Fed. Cir. 1986)).

In addition to the Declarations as discussed above and to further demonstrate due diligence during the period from prior to February 25, 2004 to October 19, 2004, a Declaration under 37 CFR § 1.131 signed by inventor Lee and a Declaration under 37 CFR § 1.131 signed by patent attorney Park are provided herewith. As demonstrated in these declarations, between a date prior to February 25, 2004 to October 19, 2004, the inventors conceived and developed the idea into the invention as presently claimed, presented the idea to their patent attorney, and participated in the drafting of a patent application in a diligent manner until the application was constructively reduced to practice upon the filing of the patent application on October 19, 2004. Additionally, the patent attorney working on this matter provided reasonable diligence in drafting, editing, and providing the relevant documents for the patent application filed on October 19, 2004. Paragraphs 2–7 of the Lee Declaration and paragraphs 2–5 of the Park Declaration as provided herewith along with Exhibits I – IX show this diligence for the entire period from February 25, 2004 to the filing of the priority document (KR Application No. KR 10-2004-0083710) on October 19, 2004.

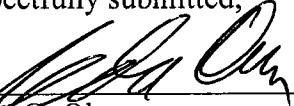
Thus, Applicants have shown conception from before the earliest priority date of Kley followed by due diligence until the invention was constrictively reduced to practice on October 19, 2004 with the filing of a Korean patent application. Thus, Applicants respectfully request that these rejections of claims 1-7 be withdrawn.

CONCLUSION

Applicants respectfully submit that the application is in condition for allowance. Favorable consideration on the merits and prompt allowance are respectfully requested. In the event any questions arise regarding this communication or the application in general, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Dated: March 17, 2010

Respectfully submitted,

By 
Lydia G. Olson

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Attorneys/Agents For Applicant

Docket No.: 06181/0207506-US0
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jae Kap Lee

Application No.: 10/574,264

Confirmation No.: 7194

Filed: March 31, 2006

Art Unit: 1792

For: DIAMOND SHELL WITH A GEOMETRICAL
FIGURE AND METHOD FOR FABRICATION
THEREOF

Examiner: J. A. Miller

DECLARATION OF JAE KAP LEE
UNDER 37 C.F.R. § 1.131MS AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I, Jae Kap LEE do hereby declare and state as follows:

1. I am one of the inventors of the subject matter described and claimed in the above-identified patent application.

2. As provided on page 4 of Exhibit 3, which was submitted in the first Declaration under 1.131, future works in this invention as of the May 14, 2004 date of the Exhibit included the following optimization for fabrication of the diamond shells:

Pretreatment for diamond growth,
Control of shell's opening size,
Control of surface morphology,
Optimization of etching condition, and
Different size, shape.

I, along with Dr. P. John, worked on these optimizations at least between the May 14, 2004 date of Exhibit 3 and July 8, 2004, the date of the draft application previously submitted in the first Declaration under 1.131 as Exhibits 5 and 6. Optimization of the invention performed in this time period included, for example, varying the shape of the matrix into a "sphere, tetrahedron, hexahedron and the like and varying the size of each matrix" (Exhibit 6 page 7 lines 22-24), and optimizing the etching conditions by using HF solution at 60°C for 24 hours (Exhibit 6 page 9 lines 19-20).

3. An email dated June 23, 2004 between Carol Phillips, an employee at Heriot-Watt University (HWC) and myself, is submitted herewith as Exhibit 1, clearly showing formal discussions were initiated in order to patent the invention as of June 23, 2004. The email refers to a meeting of the Innovation Exploitation Board to occur on August 9, 2004 and discloses an intention to discuss this invention at the meeting.

4. I, and inventor Philip John, diligently worked on the experiments, analysis and reducing the invention to writing from prior to February 25, 2004 until at least July 13, 2004, when I contacted the law firm of Park, Kim and Partner, regarding drafting a patent application. Between July 13 and July 22, I corresponded, via email, with my patent Attorney, Ik-Bae Lee, regarding drafting the claims so that the claims accurately characterized my invention. See the correspondence provided as Exhibit III.

5. During the time between July 13, 2004 and October 19, 2004, inventor Phillip John, resided in the UK whereas I resided in Korea. Thus, correspondence necessarily took more time than would have been required had Phillip John been in the same location as myself.

6. Both HWU in the UK and the KIST in Korea have rights to the invention. Thus, a reasonable amount of time was required for all interested parties to come to an agreement regarding the invention, review the application and perfect the ownership of the invention. Evidence of these transactions which show diligence in providing a draft application and thus obtaining a constructive reduction to practice includes:

- a. Minutes of a meeting of the HWU Innovation Exploitation Board and documents that HWU formally discussed the joint invention in a meeting held on Aug. 10, 2004 are submitted herewith as Exhibit IV.
- b. A letter dated August 17, 2004 informing inventor Phillip John of the discussion of the Innovation Exploitation Board is submitted herewith as Exhibit V. This letter shows that this invention was under discussion as of August 17, 2004.
- c. An email chain between Carol Phillips, an employee at HWC and myself, occurring between Aug. 23, 2004 and September 24, 2004 is submitted herewith as Exhibit VI. This email chain shows that KIST and HWU discussed patenting the invention at this time. As stated in the email, I was anxious to have the agreement in place so I could file the patent as soon as possible (Exhibit VI, page 5). Additionally, this email confirms that a draft of the patent application was sent to Carol Phillips as of Sept. 7, 2004. This draft was sent to the IIWC IP manager to comment on, with hopes of feedback by the end of the week (Exhibit VI page 2).

7. Between October 4 and October 22, 2004, I corresponded, via email, with my patent Attorney, Ik-Bae Lee, regarding the claims and the specification. This correspondence was to confirm the claims and specification accurately characterized my invention. See Exhibit VII.

8. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated: March 12, 2010

Jae Kap Lee
Jae Kap Lee, Inventor

Docket No.: 06181/0207506-US0
(PATENT)**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:
Jae Kap Lee**Application No.: 10/574,264****Confirmation No.: 7194****Filed: March 31, 2006****Art Unit: 1792****For: DIAMOND SHELL WITH A GEOMETRICAL
FIGURE AND METHOD FOR FABRICATION
THEREOF****Examiner: J. A. Miller****DECLARATION OF JANG WON PARK
UNDER 37 C.F.R. § 1.131**

MS AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I, JANG WON PARK do hereby declare and state as follows:

1. My law firm, Park, Kim and Partner, was involved in the preparation of the priority document for the above-identified patent application.

2. On July 13, 2004, Park, Kim and Partner was contacted regarding drafting a patent application. An initial draft disclosing the invention is provided as evidenced by the Progress of Application, Exhibit II. Page 4 of Exhibit II demonstrates that a draft specification and invention transfer were received by Park, Kim and Partner, and the specification was reviewed on July 13 2004.

3. Between July 13 and July 22 and between October 4 and October 22, 2004, inventor Jae Kap Lee corresponded, via email, with Park, Kim and Partner attorney Ik-Bae Lee regarding drafting the claims so that they accurately characterized the invention and confirming that the claims and specification accurately characterized the invention. See Exhibits III and VII.

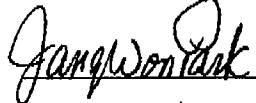
4. In order to file the priority document in the Korean Patent Office, documentation including a Power of Attorney from the foreign-based inventor and an Applicant Code for HWC were obtained. Evidence of due diligence in obtaining these documents include:

- a. A Power of Attorney, dated October 7, 2004 was received from UK inventor Phillip John. Confirmation that this document was received is presented herewith as Exhibit VIII.
- b. Park, Kim and Partner applied for an Applicant Code for HWC prior to the filing of the priority document for the present application. On October 14, 2004, the KOREA Intellectual Property Office sent a Notice of Applicant Code. This is documented in Exhibit IX.
- c. The priority document (KR Application No. KR 10-2004-0083710) for the present application was filed on October 19, 2004.

5. Thus, Park Kim and Partner pursued the filing of this application with reasonable diligence from the initial disclosure received on July 13, 2004 to the constructive reduction to practice on October 19, 2004.

6. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated: March 15, 2010



Jang Won Park, Attorney

Exhibit I

jklee@kist.re.kr

보낸 사람: <C.J.Phillips@hw.ac.uk>
 받는 사람: "이재갑" <jklee@kist.re.kr>
 보낸 날짜: 2004년 6월 23일 수요일 오전 1:06
 제목: Re: joint patent application

Hello Jae-Kap,

Good to hear from you and I hope you are settling back into life in Korea. Phil has passed the completed IDF to me and that will now go through our next stage in the commercialisation process. From the IDF form I will now, with help from Phil and yourself complete a Business Case which will be presented to our Innovation Exploitation Board. This group will next meet on the 9th of August and comprises some of the senior members of Heriot-Watt staff together with representatives from associated commercial operations. The discussions are confidential and the group decides whether to proceed with a patent and the allocation of resources (patenting costs, commercialisation officer). I will contact your commercialisation office once I have a completed business case. I will forward on an electronic copy of the IDF to you as soon as I can but at the moment we are having some real difficulties with our e mail system and I am not able to include attachments.

Kind regards

Carol

Quoting 이재갑 <jklee@kist.re.kr>:

> Dear Carol J Phillips,
 >
 > I wonder that you got my email sent on 14th of July. In the
 > email, I asked you to update the situation of the joint patent
 > application. Let me know its any progress.
 >
 > Sincerely yours,
 >
 > From Korea, Jae-Kap Lee, Ph.D.
 >
 > Research Scientist
 > Thin Film Technology Center
 > Korea Institute of Science and Technology(KIST)
 > P.O. Box 131, Cheongryang, Seoul 130-650, Korea
 > Phone: +82-2-958-5495, Fax : +82-2-958-5509,
 > E-mail: jklee@kist.re.krJae-Kap,

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Exhibit II

(Progress of) *App/Ext/Sec.*)

* १० * १०

DIAMOND SHELL WITH A GEOMETRICAL → FIGURE AND METHOD OF FABRICATION THEREOF

비[비]용과

[통보에 일발송]

Joe Klap

| | | | | | |
|---------|------------------------------------|-------|-------------------|------|------------|
| 발명의명칭 | 기후변화 대처 기술 | 제작자 | 김민기 | 수령자 | 이재갑 (1495) |
| 기록번호 | K03344 | 모집번호 | K03344 | 제출일 | 2004-02-02 |
| 증명서 | 한 | 증명서 | 한 | 증명서 | 한 |
| 권리기록 | 소유권 | 권리기록 | 권리기록 | 권리기록 | 한 |
| 권리기록 | 선행구부 | 발명자님입 | KIST | 일부양도 | 한 |
| 선행구부 | 마크프로 | 선행구부 | 20090901 | 선행구부 | 한 |
| 선행구부(1) | Heniot-Watt대학 | 선행구부 | Philip John | 선행구부 | 한 |
| 선행구부(2) | | 선행구부 | | 선행구부 | 한 |
| 선행구부(3) | | 선행구부 | | 선행구부 | 한 |
| 선행구부(4) | 호치 | 선행구부 | | 선행구부 | 한 |
| 선행구부(5) | Heriot-Watt Univ. | 선행구부 | Philip John 교수 | 선행구부 | 한 |
| 선행구부(6) | Y | 선행구부 | reception date | 선행구부 | 한 |
| 이력점수 | Y | 선행구부 | 2004-08-28 | 선행구부 | 한 |
| 공동출원인 | 국내대학인 | 선행구부 | K-3344 | 선행구부 | 한 |
| 출원인으로 | 국외대학인 | 선행구부 | CO4C 02/00 | 선행구부 | 한 |
| 출원인으로 | 국외대학인 | 선행구부 | 02-549-6934 (211) | 선행구부 | 한 |
| 이재갑박사 | Post-doc연수과정에서 발생한 연구결과로 관련과제가 없음. | 선행구부 | 2004-10-19 | 선행구부 | 한 |
| 등록번호 | KIST(56)/Heriot-Watt대학 (50) | 선행구부 | 2004-0083710 | 선행구부 | 한 |
| 등록일 | 20041019 | 선행구부 | 20041019 | 선행구부 | 한 |

kt-doc 연수 과정에서 발생한 연구 결과로 관련 표제가 없음.

Erneuerung und Anwendung der Konservierungstechnik bei der Herstellung von Konserven aus Anen

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| 상시증료일 | 20070206 | 증료구분 | 특허사정 |
| 공고일 | | 고려번호 | 등록번호 |
| 등록일 | 20070209 | 번호 | 10-0683574 |
| 고려시작일 | | 고려로인 | |
| 기술실시번호 | | 제작자 | 제조일자 |
| 양도구분 | 일부양도 | 장소 | 영도일자 |
| 증명구분 | 선택하세요 | 주소 | 20041019 |
| 증명 | Y | 일정 | |
| 현재File : | | 일정 | |
| 기술서류 | | 일정 | |
| 기록 | | 일정 | |

□ 통보메일기록 (mail record)

date of receiving.

| 발신일자 | 발신자 | 수신자 | 수신일자 |
|-------------------------|--------|--------------------|---------------|
| <i>date of sending.</i> | | | |
| 2010-02-03 | 최규훈 | 이재갑 이재갑박사 특허관련 협약서 | 미수신 |
| 2010-02-03 | 최규훈 | 이재갑박사 특허관련 협약서 | 수신 2010-02-04 |
| 2009-02-11 | 이경순 | 발명신고서 | 미수신 |
| 2007-03-06 | pat026 | 이재갑 특허증 | 수신 2007-03-06 |
| 2007-03-06 | pat026 | 권용일 특허증 | 수신 2007-03-09 |
| 2007-02-16 | pat026 | 이재갑 특허결정서 | 미수신 |
| 2007-02-16 | pat026 | 권용일 특허결정서 | 수신 2007-02-23 |

| | | | | | | |
|------------|--------|--------|---|-----|------------|----|
| 2006-10-24 | pat126 | 0재감 | 의견서 및 보정서 | 수신 | 2006-10-24 | 삭제 |
| 2006-10-24 | pat126 | 권용일 | 의견서 및 보정서 | 수신 | 2006-10-26 | 삭제 |
| 2006-08-30 | pat126 | 0재감 | [K03344]건 거절이유통지 보고 | 수신 | 2006-08-30 | 삭제 |
| 2006-08-30 | pat126 | 권용일 | [K03344]건 거절이유통지 보고 | 수신 | 2006-09-05 | 삭제 |
| 2006-06-20 | pat026 | 권용일 | 의견서 및 보정서 | 수신 | 2006-06-21 | 삭제 |
| 2006-04-11 | pat126 | 0재감 | 상기 건은 일단 국문으로 한국특허청에 4/13일 이전에 PCT출원하고, 그로부터 2월내에 영문 번역본을 보내겠습니다. 일단, 국문 검토하신 후, 늦어도 4월 7일까지는 검토결과를 알려주시길 바랍니다. 2. K-3344(국내건) 수정안 보고 --> 신기하게도 상기 건과 본 건의 기한 날짜가 4/13일로 같네요~~ 첨부 파일을 검토하신 후, 4월 7일까지 검토결과를 알려주시길 바랍니다. 주말 잘 보내시고요... 건강 유의하시길 기원합니다. 제 연락처는 이시겠지만, 02-549-6934 (211) / Igcho@koreapat.com 입니다. ** 틸시스펜으로 되어 있다면 해제해 주시길 바랍니다. ^^ **"><K03344건(국내건) 및 K3496건(PCT건) 검토안 보고 | 수신 | 2006-04-11 | 삭제 |
| 2006-03-13 | pat126 | 0재감 | 거절이유통지 보고 | 수신 | 2006-03-13 | 삭제 |
| 2006-03-13 | pat126 | 권용일 | 거절이유통지 보고 | 수신 | 2006-03-31 | 삭제 |
| 2005-06-15 | pat026 | 0재감 | 영세서 등 보정서를 송부하였습니다.. | 미수신 | | 삭제 |
| 2005-06-15 | pat026 | 권용일 | 영세서 등 보정서를 송부하였습니다.. | 미수신 | | 삭제 |
| 2005-06-15 | pat026 | | 영세서 등 보정서 | 미수신 | | 삭제 |
| 2004-11-10 | pat026 | 0재감 | 특허출원서를 송부하였습니다.. | 미수신 | | 삭제 |
| 2004-11-10 | pat026 | 김수영 | 특허출원서를 송부하였습니다.. | 미수신 | 2004-11-11 | 삭제 |
| 2004-11-10 | pat026 | | 특허출원서 | 미수신 | | 삭제 |
| 2004-10-05 | 김수영 | pat026 | 공동출원의뢰 | 미수신 | | 삭제 |

| | | | |
|------------|-----|---------|---|
| 2004-07-13 | 김수영 | pat026 | 일단 명세서만 검토요망 출원의뢰는 추 "review the specification and I will sent the written request." |
| 2004-07-13 | 조선희 | 발명(양도증) | (invention (transfer)) |
| 2004-07-13 | 조선희 | 명세서 | (specification) |

"review the specification
and I will sent the
written request."
this means
there is an
enclosure.

Exhibit III

편지 읽기

| 결재 | 담당 | 팀장 | 부장 | 분부장 | 소장 |
|----|----|----|-----------|-----|----|
| | | | 페이지 1 / 1 | | 11 |

HOME > MAIL > 편지 읽기

블록 새편지쓰기 전체답장 담장 재전송 한쇄 이동 삭제 원전삭제



제 목 [통보] 출원 진행 내역 변동

보낸 이 조선희

날짜 2004.07.13 10:16

받는 이 특허사무소.박장원(*pat026); 특허사무소.박장원(*pat126); 특허사무소.박장원(*pat226);

참조인

숨은참조

상태 긴급 보안

출원개요

관리번호 K03344 출원희망국 한국

발명의 명칭 마이크로 다이아몬드 쉘의 제조 방법

발명자 이재갑 연락처 5495

inventor JAE-KAP LEE

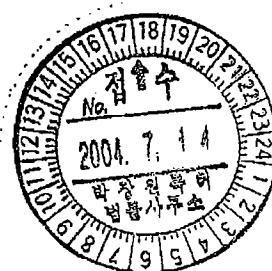
상기 출원에 변동이 발생하였으니 확인하시기 바랍니다.

✓ 일단 명세서만 검토요망 출원의뢰는 추후

상세 내역 보기

* 담당: 오재현 허리사님

7/14 ①



이익배(iblee)

받은 편지함

답장 모두답장 전달 삭제 원문다운로드 수신거부 목록보기

Sender 보낸사람 이제갑 **JAE-KAP LEE** 선택편지를 지운편지함
Recipient 받는사람 iblee@koreapat.com
제목 Re: Re:특허청구범위(K03344)
받은날짜 2004/07/22 17:54:13 **보낸날짜** 2004/07/22 17:54:51
크기 11,372 KB

Claims.

빠른 회신 감사합니다.

다이아몬드쉘 제조에 있어서 모재/다이아몬드 복합체 제조가 전제되는 것은 사실입니다. 그러나, 모재로 표면에 다이아몬드막 증착을 필요로하는 경우(예: 다이아몬드 ball)도 있을 수 있습니다. 이 경우는 복합체가 다이아몬드 쉘 제조기술과 별도의 것으로 볼 수 있을 것입니다.

수고하십시오.

이제갑 드림.

Ik-Bae Lee (patent attorney).

----- Original Message -----

From: 이익배
 To: jklee@kist.re.kr
 Sent: Thursday, July 22, 2004 5:03 PM
 Subject: Re:특허청구범위(K03344)

이제갑 박사님께

메일 잘 받았습니다.

문의하신 내용에 대해서 간단히 말씀드리면, 첫번째 경우가 권리범위 측면에서도 유리하고, 저 역시 그으로 청구범위를 작성해보도록 하겠습니다.

다만, 다이아몬드쉘 제조에 있어서 모재/다이아몬드 복합체가 전제로 되어야만 한다면, '발명의 필수구성원'으로서 그 내용도 함께 청구범위에 포함되어야 하는 것이 원칙입니다.

아직 발명 내용 전체를 다 파악하지는 않았기 때문에 확실한 방향을 말씀드릴 순 없지만, 박사님의 의견을 반영하여 명세서를 작성하고, 중간에 다시 박사님과 의견을 나누도록 하겠습니다.

무더위에 수고하시기 바라며, 다른 의견 있으시면 연락주시기 바랍니다.

박장원특허법률사무소
 변리사 이익배 드림

From: 이제갑
 Received Date: 2004/07/22 15:41:10
 Subject: 특허청구범위(K03344)

이번리사님,

전에 설명드린 바와 같이, 출원 준비 중인 "다이아몬드셀 제조방법" 명세서에서 특허청구범위를 두 개 작성하였습니다. 이와 관련하여 먼저 검토하여 주시기를 부탁드립니다.

참고로, 각각, 제가 의도하는 바는 다음과 같습니다.

첫번째 특허청구범위는, 모재입자 위에 다이아몬드를 증착하는 "모재/다이아몬드막 복합체 제조방법"을 "다이아몬드 셀 제조방법"과 독립된 것으로 해석하는 것이고(복합체 제조방법을 우선권으로 주

두번째 것은 특허청구 범위를 "다이아몬드 셀 제조방법"에 한정하는 것입니다(복합체 제조기술을 방으로 기술). 즉, 복합체 제조가 다이아몬드 셀 제조 공정 중의 하나라고 보는 것입니다.

가능하다면, 첫번째의 것으로 하고 싶습니다만, 제 생각은 가능할 것 같습니다만(다이아몬드합성에 사용의 실험으로 모재표면의 전체가 다이아몬드로 덮어지는 경우는 없음.), 가능할지요?

수고하십시오.

이재갑 드림.

Jae-Kap Lee, Ph.D.
Research Scientist
Thin Film Technology Center
Korea Institute of Science and Technology(KIST)
P.O. Box 131, Cheongryang, Seoul 130-650, Korea
Phone: +82-2-958-5495, Fax : +82-2-958-5509,
E-mail: jklee@kist.re.kr

이전 ◀

▶ 다음

Copyright(C) 2002 DEEPSOFT Company

이익배(iblee)

발신 편지함

답장 모두답장 전달 삭제 원문다운로드 수신거부 목록보기

선택편지를 자운편지함 으로

sender 보낸사람 이재갑 **JAE-KAP LEE.**

recipient 받는사람 iblee@koreapat.com

제목 특허청구범위(K03344)

발신날짜 2004/07/22 15:41:40

보낸날짜 2004/07/22 15:42:15

크기 5.668 KB

claim.

이번리사님,

전에 설명드린 바와 같이, 출원 준비 중인 "다이아몬드쉘 제조방법" 명세서에서 특허청구범위를 두 가지입니다. 이와 관련하여 먼저 검토하여 주시기를 부탁드립니다.

*discussion
about
claims.*

참고로, 각각, 제가 의도하는 바는 다음과 같습니다.

첫번째 특허청구범위는 모재입자 위에 다이아몬드를 증착하는 "모재/다이아몬드막 복합체 제조방법"을 쉘 제조방법"과 독립된 것으로 해석하는 것이고(복합체 제조방법을 우선권으로 주장).

두번째 것은 특허청구 범위를 "다이아몬드 쉘 제조방법"에 한정 하는 것입니다(복합체 제조기술을 방어적

술). 즉, 복합체 제조가 다이아몬드 쉘 제조 공정 중의 하나라고 보는 것입니다.

가능하다면, 첫번째의 것으로 하고 싶습니다만, 제 생각은 가능할 것 같습니다만(다이아몬드합성에서 한

으로 모재표면의 전체가 다이아몬드로 덮어지는 경우는 없음.), 가능할지요?

수고하십시오.

이재갑 드림.

Jae-Kap Lee, Ph.D.
Research Scientist
Thin Film Technology Center
Korea Institute of Science and Technology(KIST)
P.O. Box 131, Cheongryang, Seoul 130-650, Korea
Phone: +82-2-958-5495, Fax : +82-2-958-5509,
E-mail: jklee@kist.re.kr

이전  다음 

Exhibit IV

HERIOT-WATT UNIVERSITY

INNOVATION EXPLOITATION BOARD (IEB)

MINUTES of meeting held on 10th August 2004

PRESENT: Ms G E McFadzean (GEM)
Mr G Black (GB)
Dr M K Cox (MKC)

In Attendance Miss A K Hearn (AKH)
Mr Rudiger Mull (University of Bonn)
Mr Thomas Kroener (Forschungszentrum Karlsruhe)

1.0 APOLOGIES FOR ABSENCE

Apologies were received from Professor D R Hall, Dr G S Buller, Professor D M Lane, Mr N Somerville, Dr A W MacKinnon.

2.0 MINUTES OF PREVIOUS MEETING

The minutes of meeting held on 8th June 2004 were accepted as a true and accurate record.

3.0 MATTERS ARISING

There were none.

4.0 RECOMMENDATIONS FOR ACTION

4.5 Business Case for A Method for the Fabrication of Micro-Diamond Hollow Shells (P John)

Agreed to conclude negotiations with KIST on the protection and commercialisation of this technology. KIST to pay for patent application and maintenance and subtract this from future shared royalty income. Annual Reviews of activity to be undertaken with KIST and reported back to IEB. MKC to contact inventor in the first instance and AKH to write formally informing him of Board's decision. **Action: MKC/AKH**

5.0 ANY OTHER BUSINESS

There was none.

6.0 DATE OF NEXT MEETING

The next meeting will be held on Tuesday 5th October, 2004 at 2pm in the Presentation Area, George Heriot Wing. Paperwork for inclusion at the next meeting should reach Amanda Hearn, TRS **no later than Thursday 30th September, 2004**.

Exhibit V



17th August 2004

Professor P John
School of Engineering & Physical Sciences
Heriot-Watt University
Riccarton
Edinburgh

Dear Professor John

Business Case for A Method for the Fabrication of Micro-Diamond Hollow Shells

I am writing to inform you that at its last meeting on 10th August 2004, the Innovation Exploitation Board agreed to conclude negotiations with KIST on the protection and commercialisation of this technology, and for Kist to fund the patent application and attempt to commercialise the technology. It is understood that Heriot-Watt University will receive half the royalties, after patenting costs have been subtracted. They requested that Annual Reviews of activity be undertaken with KIST and reported back.

Mike Cox/Carol Phillips will be in contact with you separately in this regard but please do not hesitate to contact me if you wish to discuss this further.

Yours sincerely

A handwritten signature in black ink that appears to read "Amanda Hearn".

Amanda Hearn
Secretary to IEB

Cc Dr M K Cox
Dr C J Phillips

Technology and Research Services

Business Executive Centre, Heriot-Watt University, Edinburgh, EH14 4AS, United Kingdom
Telephone +44 (0)131 451 3192, Fax +44 (0)131 451 3193
Email TRS@hw.ac.uk www.trs.hw.ac.uk

Edinburgh Campus • Scottish Borders Campus

Exhibit VI

○ 프린트 : Print

보낸사람 (이재갑) jklee@kist.re.kr

받는사람 bspark@kist.re.kr

참 조

제 목 letter 초안 송부

· 2004/08/30(월) 10:42am 발송됨 · 본문형식 : HTML 문서 · 중요도 : 보통



박병수씨,

Carol에게 보낼 편지의 초안입니다. 아래 내용 중 xx로 표시된 날짜를 기입해야합니다.
참고하십시오.

수고하십시오.

이재갑.

Jae-Kap Lee, Ph.D.

Research Scientist

Thin Film Technology Center

Korea Institute of Science and Technology(KIST)

P.O. Box 131, Cheongryang, Seoul 130-650, Korea

Phone: + 82-2-958-5495, Fax : + 82-2-958-5509,

E-mail: jklee@kist.re.kr

=====

Dear Carol,

We have examined the revised agreement you sent on xx/8/04 and concluded that it is acceptable although there is room for discussing further about the patenting costs.

I heard from Jae-Kap that Phillip is concern about paying a half of the Korean patenting cost. This is good news to me because even obligation is a basic concept on this agreement. The cost for HWU will be about 500 pound. If you are willing to pay the cost, I will let a legal agency in Korea contact you later. While if you cannot afford to pay it still, we will pay it instead. I'd like to let you know, however, we can't guarantee the cost to be needed for foreign patenting. We need to discuss this matter later.

I hope to hear your final opinion on this agreement and the costs. I think you didn't change the title on the last page of the revised agreement.

 프린트 | Print

보낸사람 (Phillips, Carol J) C.J.Phillips@hw.ac.uk

받는사람 bspark@kist.re.kr

참 조

제 목 RE: RE: RE: Joint patent application

- 2004/09/07(화) 07:25pm 발송됨 ← 본문형식 : HTML 문서 → 중요도 : 보통



Dear Mr Park,

Thank you for your e mail.

I am pleased you are now able to accept the revised agreement. In order to progress things if you could print and sign two copies and send them to me. I will arrange for an authorised University Signatory to sign and return a copy to you for your records.

Just to confirm we do not have the funds to allocate to this patent application. As you say you can discuss foreign patenting later. Normally before proceeding to filing patents in other countries we would expect a strong commercial case for the technology. Ideally a third party may have been identified to licence the technology too.

Once the agreement is in place then I hope we can keep in touch regularly to assess how the commercialisation is progressing. In our organisation it is the Technology Transfer Office that leads on this with help from the Researchers who provide useful contacts. In KIST who will be responsible for identifying third party licencees for the technology?

Dr Lee has provided a first draft of the patent application which I have sent to our IP Manager to comment on and hope to have some feedback by the end of the week.

I look forward to receiving the signed copies of the agreement.

 best wishes

Carol

From: bspark@kist.re.kr [mailto:bspark@kist.re.kr]**Sent:** 01 September 2004 08:21**To:** Phillips, Carol J**Subject:** Re: RE: RE: Joint patent application

Dear Dr Carol,

We have examined the revised agreement you sent on 25/8/04 and concluded that it is acceptable although there is room for discussing further about the patenting costs.

I heard from Jae-Kap that Phillip is concern about paying a half of the Korean patenting cost. This is good news to me because even obligation is a basic concept on this agreement. The cost for HWU will be about 500 pound. If you are willing to pay the cost, I will let a legal agency in Korea contact you later. While if you cannot afford to pay it still, we will pay it instead. I'd like to let you know, however, we can't guarantee the cost to be needed for foreign patenting. We need to discuss this matter later.

I hope to hear your final opinion on this agreement and the costs.

Kind regards

Park

>

>

> -----원본메시지-----

> 보낸사람: "Phillips, Carol J"
> 받는사람: bspark@kist.re.kr
> 날짜: 2004/08/23(월)16:41
> 제목: RE: RE: Joint patent application

>

> Hello Mr Park,

>

> I have resaved the file as a word document – it is only 93 kb now so should be easier to open. Please let me know if this works. If not I can fax you a copy.

>

> Kind regards

>

> Carol

>

>

> From: bspark@kist.re.kr [mailto:bspark@kist.re.kr]
> Sent: 23 August 2004 08:35
> To: Phillips, Carol J
> Subject: Re: RE: Joint patent application

>

>

>

> Dear Dr. Carol

>

> I cannot still open attached file.

> Please send it to me by compressed file(or zip file)

>

> Kind regards

>

> Park

Dear Dr Carol,

Thank you for your e-mail.

We are planning to sign the PATENT APPLICATION AND USE AGREEMENT.

By the way we have some questions concerning the agreement as follows :

1. Who is signing the agreement in the university? Is it proper for patent manager to sign the agreement?
2. Generally it is not essential for the witness to sign the agreement in Korea. So we don't know who is the right man to sign. Could you advise us about that?
3. We don't understand the meaning of the page from 12 to 13. Please explain to us. I think you didn't change the title on that page of the revised agreement.

We look forward to hearing from you soon.

Kind regards

Park

○○

○ 프린트 | Print

보낸 사람 (Phillips, Carol J) C.J.Phillips@hw.ac.uk

받는 사람 bspark@kist.re.kr

참 조

제 목 FW: RE: RE: RE: Joint patent application

◆ 2004/09/24(금) 01:22am 발송됨 ◆ 본문 형식 : HTML 문서 ◆ 중요도 : 보통



Dear Mr Park,

Please find attached the agreement with modifications as discussed previously. I appreciate that Dr Lee is anxious to have the agreement in place so he can file the patent as soon as possible so if you could let me know if there are any further problems.

Kind regards

Carol



From: Phillips, Carol J
Sent: 17 September 2004 14:35
To: 'bspark@kist.re.kr'
Subject: RE: RE: RE: RE: Joint patent application

Dear Mr Park,

My apologies for not getting back to you sooner.

I have passed the agreement back to our Legal Team to make the appropriate modifications to pages 12 and 13. These are the cover sheets to the agreement but it is important that they have the same title as the rest of the agreement. I should have this back to you early next week - the University is on Holiday on Monday so it will probably be Tuesday.

Regarding Signature - Jamie Watt our Intellectual Property Manager is an authorised signatory for the university, and therefore can sign this agreement on its behalf.

As regards a witness, it is not absolutely necessary but good practice. It should be anyone (of sound mind) that sees you sign the agreement. A witness is used in order to provide evidence that a person has signed an agreement if needed in the future.

Kind regards

Carol

From: bspark@kist.re.kr [mailto:bspark@kist.re.kr]
Sent: 14 September 2004 01:32
To: Phillips, Carol J
Subject: Re: RE: RE: RE: Joint patent application

Dear Dr Carol,

Thank you for your e-mail.

We are planning to sign the PATENT APPLICATION AND USE AGREEMENT.
By the way we have some questions concerning the agreement as follows :

1. Who is signing the agreement in the university? Is it proper for patent manager to sign the agreement?
2. Generally it is not essential for the witness to sign the agreement in Korea. So we don't know who is the right man to sign. Could you advise us about that?
3. We don't understand the meaning of the page from 12 to 13. Please explain to us. I think you didn't change the title on that page of the revised agreement.

We look forward to hearing from you soon.

Kind regards

Park

박 병 수
한국과학기술연구원(KIST) 기술사업단 특허팀
전화 : 02-958-6054, 팩스: 02-958-6029
e-mail : bspark@kist.re.kr
서울시 성북구 하월곡동 39-1 우) 136-791

MIME Type application/msword

파일이름 hw proposed agreement 17.doc

파일크기 134.4KB

바이러스 검사결과 감염된 바이러스가 없으니 안심하고 받으셔도 됩니다

개인 디렉터리 /   

Exhibit VII

이익배 (iblee)

발신 편지함

답장 모두답장 전달 삭제 원문다운로드 수신거부 목록보기

선택편지를 지운편지함

Sender
recipient

보낸 사람

이재갑 JAE-KAP LEE.

받는 사람

iblee@koreapat.com

제목

Re: Re:초안 수정안 송부(K3344)

받은 날짜

2004/10/12 15:47:32

보낸 날짜

2004/10/12 15:50:55

크기

311.928 KB

draft specification amended.

첨부 파일

K3344-명세서 초안3.hwp

다운로드

개인파일로 내려받기

enclosure.

잘 알겠습니다. 다이아몬드입자 협성법을 "별개의 청구항"으로 넣어 주십시오.

information

about

specification

and claims

그리고, 명세서의 일부가 수정 및 보충되었습니다. 수정된 부분은 밑줄을 그어놓았는데,

-8페이지 10줄

-실시예 1, 2, 5 입니다.

이 수정안으로하여, 출원을 진행하여 주십시오.

감사합니다.

이재갑 드림.

----- Original Message -----

From: 이익배

To: jklee@kist.re.kr

Sent: Tuesday, October 12, 2004 1:57 PM

Subject: Re: Re:초안 수정안 송부(K3344)

Ik-Bae Lee (patent attorney).

이 재 갑 박사님께

메일 잘 받았습니다.

모내주신 수정안을 검토해본 결과, 다이아몬드 셀과 다이아몬드 입자 협성방법을 하나의 청구항으로 3 위해 독립항인 청구항 1을 너무 무리하게 포괄적으로 구성하였다는 느낌이 듭니다. 이렇게 될 경우, 청권리범위가 모호해져 전체적으로 발명 내용이 불명확해지기 때문에 심사관의 거절이유를 피하기 어렵

따라서, 별개의 청구항으로 구성하는 것이 바람직할 것으로 생각됩니다. 만일 다이아몬드 입자 협성이 한 것이라면, 별도의 출원으로 진행하는 것도 하나의 방법이 될 수 있습니다. 어떤 경우에도 청구범위 C를 이상의 공정을 하나의 청구항으로 하는 것은 바람직하지 않을 것으로 예상됩니다.

박사님의 추가 의견 부탁드립니다.

박장원 특허법률사무소
변리사 이익배 드림

From: 이재갑
Received Date: 2004/10/12 12:14:35
Subject: Re: Re: 초안 수정안 송부(K3344)

감사합니다.

일부를 수정하였습니다.

이는 전에 요청드렸던 "CVD 다이아몬드 입자"를 청구항에 포함하기 위한 것입니다. 먼저 특허청구법 청구항 1을 수정하는데, 이의 타당성을 먼저 검토하시는 것이 좋을 것 같습니다. 나머지 수정된 부분은 이에 따른 수정으로 이해하시면 될 것 같습니다. 수정된 부분은 밑줄을 그어 놓았습니다.

기존, 본문 및 도면에 "CVD 다이아몬드 입자"를 분명하게 설명하였고 나타내었기 때문에, 이를 청구 넣을 수도 있다고 사료됩니다만, 이 변리사님의 검토를 부탁드립니다.

이제 갑 드림.

----- Original Message -----

From: 이익배
To: jklee@kist.re.kr
Sent: Thursday, October 07, 2004 1:01 PM
Subject: Re: Re: 초안 수정안 송부(K3344)

이재갑 박사님께

답장 잘 받았습니다.

최종 수정된 내용을 보내드립니다.

수고하세요.

이익배 드림

From: 이재갑
Received Date: 2004/10/07 18:07:11
Subject: Re: Re: 초안 수정안 송부(K3344)

빠른 회신에 감사드립니다.

그렇게 하십시오.

최종 수정 본을 보내 주시면 감사하겠습니다. 영국족과 협의가 필요합니다.

수고하십시오.

이재갑 드림.

----- Original Message -----

From: 이익배
To: jklee@kist.re.kr
Sent: Thursday, October 07, 2004 5:59 PM
Subject: Re: Re: 초안 수정안 송부(K3344)

이재갑 박사님께

메일 잘 받았습니다.

바쁘신 와중에도 빠른 검토 결과를 알려주셔서 감사드립니다.

수정해주신 청구범위는 대체적으로 큰 문제는 없어보이는데, 다만 마지막 부분의 청구항에서 다아이몬드 셀이 아닌 다아이몬드 입자의 형성방법으로 하는 것은 특허법상 문제의 소지가 있습니다. 즉, 하나의 발명이 아닌 두 개의 발명으로 취급되어 출원 자체를 2 개로 나누어야 하는 문제가 발생될 수 있습니다.

청구범위를 작성하면서, 다아이몬드 입자임에도 셀로 표기하는 것이 다소 무리가 있다고 생각했지만, 위와 같은 문제가 발생될 소지가 있어 부득이 입자가 아닌 셀로 표기한 것이니 이점 양지하여 주시고, 가급적 저희가 보내드린 명세서 초안 2의 표기대로 하는 것이 좋을 것 같습니다.

나머지 부분은 박사님의 의견대로 수정하여도 무방합니다.

박사님의 의견 부탁드리겠습니다.

박장원 특허법률사무소
법리사 이의배 드림

From: 이재갑
Received Date: 2004/10/07 17:52:08
Subject: Re: 초안 수정안 송부(K3344)

감사합니다.

Heriot-Watt University의 위임장 관련은 KIST 특허담당에서 진행할 것입니다. 보내주신 명세서의 특허청구범위의 일부를 수정하여 보내드립니다. 검토하여 주십시오.

번거로운 일을 맡아 주셔서 감사합니다. 수고하십시오.

이재갑 드림.

----- Original Message -----

From: 이의배
To: jklee@kist.re.kr
Sent: Wednesday, October 06, 2004 11:24 AM
Subject: Re: 초안 수정안 송부(K3344)

이재갑 박사님께

보내주신 메일 잘 받았습니다.

그렇지 않아도 연락이 없어서 계속 기다리던 중이었는데, 수정 내용 및 계약이 완료되었다는 소식을 함께 알려주셔서 반가웠습니다.

명세서는 수정 보완에 따라 내용적으로 많이 풍성해진 느낌입니다. 첨부파일에는 수정내용이 그대로 반영되면서 청구범위를 좀서 수정안 최종본을 보내드립니다. 도면은 지난번 1차 초안에서 사용한 도면을 첨부할 예정입니다.

한편, 본 발명의 출원을 위해서는 공동출원인인 Heriot-Watt University의 위임장이 있어야 하기 때문에 위임장 양식을 함께 보내드리오니 상기 대학의 담당자(발명자가 아니라 대학 당국의 책임있는 관리자)로부터 sign을 받아 우편으로 신속히 회신하여 주시기 바랍니다.

기타, 궁금하신 사항 있으시면 언제든지 연락주시기 바랍니다.
수고하세요.

박장원 특허법률사무소

번역사 이익배 드림

From: 이재갑
Received Date: 2004/10/04 10:59:06
Subject: 초안 수정안 풍수(K3344)

이 번역사님,

화신이 많이 늦었습니다. 영국족과 Agreement 작성이 이제서야 완료되었습니다.

영국족과 협의된 내용의 명세서를 보내드립니다. 많은 부분(특히 실시에 및
통허청구범위)이 수정되었으며, 한 file은 수정부분이 표시된 상태(K3344-
수정0.hwp), 다른 한 file은 수정된 상태(K3344-수정1.hwp)로 보내드립니다.

주된 수정 부분은,

전에는 주된 내용이 "모재/다이아몬드 복합체(다이아몬드막이 모재 전체를
둘러싸는)" 제조 및 "다이아몬드 웰" 제조이었으나, 수정된 명세서에는 "다
이아몬드 웰" 제조가 주된 내용입니다.

畢竟, 이 명세서 내용을 토대로 합당하게 수정되어 출원되기를 바랍니다.

이 곳의 사정으로 출원이 많이 늦어졌습니다. 빠른 출원이 이루어지기를 부
탁드립니다.

감사합니다.

이재갑 드림.

Jae-Kap Lee, Ph.D.
Research Scientist
Thin Film Technology Center
Korea Institute of Science and Technology(KIST)
P.O. Box 131, Cheongryang, Seoul 130-650, Korea
Phone: +82-2-958-5495, Fax : +82-2-958-5509,
E-mail: jklee@kist.re.kr

이전 ◀ 다음 ▶

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Exhibit VIII

PARK, KIM & PARTNER
Gwang Hwa Moon P.O. Box No. 882
SEOUL 110-608, KOREA

POWER OF ATTORNEY

Applicant's full name and
address including country

I/We, the undersigned,

HERIOT-WATT UNIVERSITY
Riccarton, Edinburgh, EH14 4AS
United Kingdom

do hereby appoint **JANG WON PARK**,
registered patent attorney(s) of 200 Nonhyun-Dong, Gangnam-Ku, Seoul, the
Republic of Korea, as my/our lawful attorney(s) with full power and authority
of substitution and revocation of sub-attorney(s) to take, on my/our behalf, pro
ceedings for making

Leave blank

Entitled: **METHOD FOR FABRICATION OF DIAMOND SHELL
WITH A GEOMETRICAL FIGURE**

before the Korea Intellectual Property Office, and if necessary, to divide said a
pplication to plural applications, to convert said application into one for patent
, utility model or design, to withdraw or abandon said application including an
application for registration of extension of duration of the patent right, to file a
petition or to withdraw it, to demand an appeal against rejection of the applic
ation or decision of dismissal of amendments, to appeal from dissatisfaction w
ith a judgement or decision of a trial or an appellate trial, or any administrative
action, or to withdraw or abandon the trial(s), appellate trial(s), or appeal(s), t
o record the change of the address or name of an applicant, and to perform all
other formalities and acts under the provisions of Article 5 of the Korean Paten
t Law, Article 3 of the Utility Model Law, Article 5 of the Trademark Law or
Article 4 of the Design Law before and after the registration of establishment o
f right with regard to the above.

Dated this 7th day of OCTOBER 2004

Corporation name (Leave blank
in case of an individual)

HERIOT-WATT UNIVERSITY

Signatory's full name with position title,
if any, below the signature

BY: _____
Name: _____
Title: *Jaww Z*
INTELLECTUAL PROPERTY & CONTRACTS
ADVISOR

(no Notarization)

PATENT APPLICATION AND USE AGREEMENT

between

HERIOT-WATT UNIVERSITY, Riccarton, Edinburgh, EH14 4AS (hereinafter referred to as "the University")

and

THE KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY of 39-1 Hawolgok-dong
Seongbuk-gu, Seoul, 136-791, Korea (hereinafter referred to as "the Institution")

WHEREAS:-

- (A) The University and the Institution are the joint owners of certain inventions as further described in the Schedule to this Agreement (the "Inventions") which were jointly created and developed by Professor Phillip John of the University and Doctor Jae-Kap Lee a researcher at the Thin Film Materials Center of the Institution and of any Patents and Know-How relating thereto concerning a method for the fabrication of hollow micro-diamond products;
- (B) The Institution and the University wish to use and exploit and to sublincence the use and exploitation of the Inventions, Patents and Know-How; and
- (C) The Institution and the University have agreed to grant to each other licences to use and exploit and to sublincence the use and exploitation of their respective interests in the Inventions, Patents and Know-How, on the terms and conditions set out in this Agreement.

THE PARTIES AGREE as follows:-

1. DEFINITIONS AND INTERPRETATION

In this Agreement (including the recitals), unless the context otherwise requires, the following words and expressions shall have the meanings set out opposite them: -

Commencement Date means 1st August 2004;

Know-How means the various techniques, methods, skills and all technical information, data, notes, reports, and other knowledge of a secret and confidential nature relating to the Inventions or Patents now in the possession of the University or the Institution;

Net Income means the gross income received by a Party in respect of their use, exploitation or sublicensing of the Inventions, Patents or Know-How less any expenses incurred by that Party relating to the prosecution of any patent applications contained within the Patents;

Patents means any patent applications relating to the Inventions including any contained within the Schedule, any other patent applications filed by the Parties which claim priority from any patent applications relating to the Inventions including any contained within the Schedule, any patents granted pursuant to the patent applications relating to the Inventions or those contained within the Schedule and any patent applications claiming priority therefrom, and any reissues, extensions, substitutions, continuations, divisions, continuation-in-part applications and supplementary protection certificates based on and including any subject matter claimed or disclosed in any of the aforementioned patent applications and/or patents;

Product means any product obtained or derived directly or indirectly from or utilising the Inventions, Patents, the Know-How;

Schedule means the schedule annexed to and which will be deemed to form part of this Agreement;

Sub-Licensor means any third party to whom a Party grants a sub-licence of their rights under this Agreement in accordance with Clause 8;

Year means the period of one (1) year commencing on the Commencement Date and each subsequent period of one (1) year during the period of this Agreement.

- 1.2 Words denoting the singular include the plural and vice versa, words denoting a gender include all genders, and words denoting persons include corporations and all other legal entities.
- 1.3 Unless the context otherwise requires, references in this Agreement to any Clause will be deemed to be a reference to a clause of this Agreement.
- 1.4 The headings are inserted for ease of reference only and will not affect the interpretation or construction of this Agreement.

2. DURATION

- 2.1 Notwithstanding the date or dates of execution, this Agreement will commence on the Commencement Date and subject to any mandatory provisions from time to time in force under any applicable legal system which expressly or by implication apply notwithstanding the terms of this Agreement and earlier termination under Clauses 12 or 14, the licences granted hereunder will continue in full force and effect for a period of twenty (20) Years. This Agreement may thereafter be extended for a further period or periods by the written agreement of both parties.

3. GRANT OF LICENCE

- 3.1 The University hereby grants to the Institution, and the Institution hereby accepts, a worldwide non-exclusive non-transferable royalty bearing licence to use and to permit third parties to use their interest in the Inventions, Patents and Know-How for the purpose of developing, manufacturing, distributing and selling Products on the terms and conditions contained in this Agreement.
- 3.2 The Institution hereby grants to the University, and the University hereby accepts, a worldwide non-exclusive non-transferable royalty bearing licence to use and to permit third parties to use their interest in the Inventions, Patents and Know-How for the purpose of developing, manufacturing, distributing and selling Products on the terms and conditions contained in this Agreement.
- 3.3 Nothing contained in this Agreement shall prevent the University and the Institution from using the Inventions, Patents or Know-How for any internal academic purposes or for conducting research on behalf of third parties.

4. SUPPLY OF KNOW-HOW

- 4.1 The University will during the period of this Agreement deliver to the Institution any Know-How in their possession in written form in sufficient detail to enable the Institution or their Sublicensees to use the Inventions and Patents for the purpose of developing, manufacturing, distributing and selling Products.
- 4.2 The Institution will during the period of this Agreement deliver to the University any Know-How in their possession in written form in sufficient detail to enable the University or their

Sublicensees to use the Inventions and Patents for the purpose of developing, manufacturing, distributing and selling Products.

5. COMMERCIAL EXPLOITATION

- 5.1 The Parties will at all times during the period of this Agreement use all reasonable endeavours to commercially exploit the Inventions, Patents, the Know-How to the fullest extent.
- 5.2 The Parties will not or permit any Sublicensee to at any time sell, lease, hire or otherwise dispose of Products for a non-monetary consideration or other than at normal commercial rates.
- 5.3 The Parties will and will ensure that their Sublicensees at all times comply with all legislation, rules, regulations and statutory requirements applying to and obtain any consents necessary for its use of the Inventions, Patents, Know-How in any country or territory.

6. FEES/ROYALTIES

- 6.1 In consideration of the rights granted to it under this Agreement, each Party will pay to the other Party royalties at the rate of fifty per cent (50%) of their Net Income generated in each Year, in the manner specified in Clauses 6.2 to 6.10.
- 6.2 Each Party will pay all royalties due to the other Party in respect of each Year within thirty (30) days of the end of the relevant Year. All payments of royalties to Parties will be accompanied by a written statement showing the following:-
 - 6.2.1 the number of Products sold by the Party and its Sub-Licenses during the relevant Year;
 - 6.2.2 the total income to that Party generated from the sale of Products;
 - 6.2.3 any costs deducted from such total income to derive Net Income;
 - 6.2.4 the Net Income generated during the relevant Year; and
 - 6.2.5 the royalties due to the other Party for the relevant Year.
- 6.3 All sums payable under this Agreement are expressed exclusive of any Value Added Tax which may be due thereon and for which the paying Party shall be additionally liable.
- 6.4 All royalties and other sums payable under this Agreement will be paid in pounds sterling, and if any royalties are calculated in a currency other than pounds sterling, they will be converted into pounds sterling at the average of the Royal Bank of Scotland average buying and average selling rates in respect of that currency during the Year in respect of which the royalties are due.
- 6.5 Interest at the rate of two per cent (2%) per annum above the base rate from time to time of the Royal Bank of Scotland will be due and payable on all sums due under this Agreement from the due date for payment until settlement in full.
- 6.6 Each Party will and will ensure that their Sub-Licenses at all times keep true and accurate records of all sales of Products during the period of this Agreement in sufficient detail to enable the amount of royalties or other sums payable to the other Party under this Agreement to be calculated. Each Party will and will ensure that their Sub-Licenses allow the other Party or its authorised agents on giving reasonable notice access to inspect and take copies of such records for the purpose of verifying the amount of royalties due to them under this Agreement.

6.7 If at any time following an inspection pursuant to Clause 6.6 either Party reasonably believes that the other Party has not paid to them the correct amount of royalties due under this Agreement, they may by serving a written notice upon that other Party require that other Party to obtain and submit to them within thirty (30) days of the date of the written notice a statement prepared by that other Party's auditors of the true amounts due to them under this Agreement. If it is established that the amount of royalties paid to them in respect of any Year is less than the amount of royalties properly payable them in respect of the relevant Year, the other Party will within seven (7) days of the date of submission of the statement referred to in this Clause pay the shortfall to them. Any overpayment of royalties will be credited against any royalties due in the following Year.

6.8 If the statement referred to in Clause 6.7 establishes that the amount of royalties properly payable to any Party in the relevant Year is five per cent (5%) or more greater than the amount of royalties actually paid to that Party in the relevant Year the other Party shall bear the costs of obtaining the statement and shall reimburse that Party for all costs and expenses reasonably incurred by that Party in making the inspection pursuant to which the underpayment is discovered. In all other circumstances that Party shall reimburse the other Party for any costs and expenses reasonably incurred by the other Party in obtaining the relevant statement.

6.9 All payments due under this Agreement will be made without any set-off, deduction or withholding except as may be required by law. If any Party is required by law to make any deduction or to withhold any part of any amount due to the other Party under this Agreement, that Party will give to the other Party proper evidence of the amount deducted or withheld and payment of that amount to the relevant taxation authority, and will do all things in its power to enable or assist the other Party to claim exemption from or, if that is not possible, to obtain a credit for the amount deducted or withheld under any applicable double taxation or similar agreement from time to time in force.

6.10 The provisions of this Clause 6 will remain in full force and effect following termination of this Agreement for whatever reason until settlement of all subsisting claims under this Agreement.

7 SUB-LICENSING

7.1 Each Party is entitled to with the other Party's prior written consent, such consent not to be unreasonably withheld or delayed, grant sub-licences of its rights under this Agreement to appropriate third parties for the sale and distribution of Products in accordance with the provisions of Clause 7.2.

7.2 All sub-licences granted under the terms of this Agreement will be non-exclusive and non-transferable. Each Party will ensure that it enters into a written agreement with any Sub-Licensor and that each sub-licence agreement contains appropriate provisions regarding field of use, access to the Sub-Licensor's books and records, confidentiality, indemnification and termination and prohibits the Sub-Licensor from granting further sub-licences of its rights.

8. CONFIDENTIALITY

8.1 Each Party will not and will ensure that its Sub-Licenses do not:

- at any time during the period of this Agreement or at any time thereafter;
- disclose or use, or permit to be disclosed or used;
- the Inventions, Know-How, or any other information of a confidential nature which is or may be disclosed by one Party to the other Party or to its Sub-Licenses during the

period of this Agreement (including but not limited to information relation to the disclosing Party's business or scientific strategies, opportunities, finances or processes);

(d) to or by any third party or to any of its employees who are not directly and necessarily involved in developing, manufacturing, selling or distributing the Products, without the other Party's prior written consent.

Each Party will ensure that its employees or its Sub-Licensees to whom the Inventions, Know-How and/ or any other information as referred to above is disclosed are made aware of the confidential nature thereof and comply at all times with the terms of this Clause 8.

8.2 Each Party will and will ensure that its Sub-Licensees take all practicable steps whilst the Inventions and Know-How are in its possession to prevent access to the Inventions and Know-How by any person not so entitled under this Agreement.

8.3 The obligations contained in this Clause will not extend to any information which a Party or its Sub-Licensees can show by written evidence: -

- 8.3.1 is or becomes generally available to the public otherwise than by reason of a breach by that Party or its Sub-Licensees of the provisions of this Clause; or
- 8.3.2 is known to that Party or its Sub-Licensees and is at their free disposal prior to its receipt from the other Party; or
- 8.3.3 is subsequently disclosed to a Party or its Sub-Licensees without obligation of confidence by a third party owing no obligation of confidentiality to the other Party in respect thereof; or
- 8.3.4 legally requires to be disclosed.

8.4 The rights and obligations of the parties under this Clause will survive termination or expiry of this Agreement.

9. **WARRANTIES AND INDEMNITIES**

9.1 No warranty is given by each Party in relation to the Inventions, Patents or the Know-How or the uses to which they may be put by the other Party or its Sub-Licensees or their fitness or suitability for any particular purpose or under any special conditions notwithstanding that any such purpose or special conditions may be known. Each Party hereby acknowledges that it has satisfied itself in relation to the foregoing matters. All conditions and warranties, express or implied, arising under statute or common law are hereby excluded.

9.2 The Institution hereby warrants to the University, and the University hereby warrants to the Institution that:

- 9.2.1 it has the full power and authority to enter into and to perform its obligations under this Agreement; and
- 9.2.2 it will and will ensure that its Sub-Licensees at all times observe and comply with the terms of this Agreement.

9.3 The Institution shall and hereby agrees to indemnify the University in full in respect of any loss, liability, damage, loss or expense (excluding indirect or consequential losses, special damages and loss of profit) incurred or suffered by or imposed upon the University, whether arising by way of a claim made by a third party or otherwise, as a result of or in connection with a breach by the Institution of the warranties given by it under this Clause 9 or as a result of or in connection with use of the Inventions, Patents, the Know-How by the Institution or its

Sub-Licensees or in relation to any Product developed, manufactured, sold or distributed by the Institution or its Sub-Licensees. The Institution shall at all times indemnify and keep indemnified the University against all losses, costs, claims, damages or expenses incurred by the University or for which the University may become liable as a result of any breach by an Institution Sub-Licensee of the terms of this Agreement, as if that breach had been a breach by the Institution.

9.4 The indemnity given by the Institution under Clause 9.3 will not apply to any liability, damage, loss or expense to the extent that it is directly attributable to the negligent act or omission, reckless misconduct or intentional misconduct of the University or its employees and agents.

9.5 The University shall and hereby agrees to indemnify the Institution in full in respect of any loss, liability, damage, loss or expense (excluding indirect or consequential losses, special damages and loss of profit) incurred or suffered by or imposed upon the Institution, whether arising by way of a claim made by a third party or otherwise, as a result of or in connection with a breach by the University of the warranties given by it under this Clause 9 or as a result of or in connection with use of the Inventions, Patents, the Know-How by the University or its Sub-Licensees or in relation to any Product developed, manufactured, sold or distributed by the University or its Sub-Licensees. The University shall at all times indemnify and keep indemnified the Institution against all losses, costs, claims, damages or expenses incurred by the Institution or for which the Institution may become liable as a result of any breach by a University Sub-Licensee of the terms of this Agreement, as if that breach had been a breach by the University.

9.6 The indemnity given by the University under Clause 9.5 will not apply to any liability, damage, loss or expense to the extent that it is directly attributable to the negligent act or omission, reckless misconduct or intentional misconduct of the Institution or its employees and agents.

9.5 The rights and obligations of the parties under this Clause will survive the termination of this Agreement.

10. PATENT PROTECTION AND INFRINGEMENT

10.1 The Institution will during the period of this Agreement be responsible for in consultation with the University prosecuting any patent applications comprised or to be comprised within the Patents and maintaining the Patents and will ensure that all filing and renewal fees necessary to prosecute and maintain the Patents are timely paid. Notwithstanding the foregoing, the Institution will have sole discretion in relation to any decision which requires to be taken with regard to prosecution and/or maintenance of the Patents, including any decision relating to removal of any country or territory from the scope of the Patents or abandonment of any patent application comprised within the Patents or amendment of any claims comprised within any such patent applications, provided always that the University may elect to continue at its own expense any Patent in any country or territory which the Institution may wish to remove from the scope of the Patents or any patent application which the Institution may wish to abandon.

10.2 Each Party will on the request of the other Party provide to that other Party all information, documentation and assistance (including but not limited to executing documents) that other Party may reasonably require to enable it to take any action or commence or conduct any proceedings pursuant to this Clause.

10.3 Each Party will at all times keep the other Party informed as regards progress of any action taken or proceedings raised by that Party pursuant to this Clause and will not settle any proceedings raised by or against it pursuant to this Clause without the other Party's prior written consent, such consent not to be unreasonably withheld or delayed.

10.4 Either Party may if it reasonably believes that there is a reasonable prospect of any action or proceedings in question raised pursuant to this Clause not being successful and that belief is backed up by the written opinion of a senior counsel elect by giving written notice to the other Party not to take any action or commence or conduct any proceedings under this Clause.

11. INFRINGEMENT

11.1 Each Party agrees that if it is notified by a third party of any claim or potential claim arising as a result of or in connection with any use of the Inventions, Patents, the Know-How or in relation to any Product developed, manufactured, sold or distributed by the Parties or their Sub-Licensees, it will:

- 11.1.1 forthwith inform the other Party of such claim or potential claim;
- 11.1.2 take all reasonable steps to prevent judgement by fault or by default being granted in favour of that third party; *judgement by default
reject (reject)*
- 11.1.3 ensure that the other Party is given the right to conduct proper consultations with the third party in relation to the claim or potential claim;

11.2 Furthermore each Party will notify the other Party of any:

- 11.2.1 actual, threatened or suspected infringement of any of the Patents;
- 11.2.2 proceedings commenced against it in which the validity or ownership of any of the Patents is challenged; and
- 11.2.3 actual, threatened or suspected breach of confidentiality relating to the Know-How,
- 11.2.4 claim or potential claim by a third party arising as a result of or in connection with any use of the Inventions, Patents, the Know-How by the or in relation to any Product developed, manufactured, sold or distributed by the Parties or their Sub-Licensees.

as soon as reasonably practicable after it becomes aware of such matters.

11.3 The Parties will meet reasonably promptly following notification of any matter under this Clause to decide what action, if any, should be taken in respect of the relevant infringement, challenge, breach or claim.

11.4 Each Party will on the request of the other Party provide to that other Party all information, documentation and assistance (including but not limited to executing documents) that other Party may reasonably require to enable it to take any action or commence or conduct any proceedings pursuant to this Clause.

11.5 Each Party will at all times keep the other Party informed as regards progress of any action taken or proceedings raised by that Party pursuant to this Clause and will not settle any proceedings raised by or against it pursuant to this Clause without the other Party's prior written consent, such consent not to be unreasonably withheld or delayed.

11.6 Either Party may if it reasonably believes that there is a reasonable prospect of any action or proceedings in question raised pursuant to this Clause not being successful and that belief is backed up by the written opinion of a senior counsel elect by giving written notice to the other Party not to take any action or commence or conduct any proceedings under this Clause.

11.7 Any monies received by or sums awarded to either of the Parties in settlement of or as compensation, costs or damages as a result of taking any action or commencing or conducting

any proceedings under this Clause less any expenses relating thereto will be treated as if they were Net Income arising in that Year.

12. TERMINATION

12.1 Either Party may terminate this Agreement forthwith by giving written notice to the other Party if:-

12.1.1 any fees, royalties or other sums payable by the other Party under this Agreement remain unpaid thirty (30) days after the due date for payment thereof; or

12.1.2 at any time during the period of this Agreement the other Party directly or indirectly opposes or assists a third party to oppose the grant of any patent pursuant to any patent application comprised within the Patents or disputes or directly or indirectly assists a third party to dispute the validity or ownership of any patent comprised within the Patents or any of the claims thereof.

12.1.3 in the event that the other Party or its Sublicensees do not commercially exploit the rights licensed under this Agreement within a period of five years from the Commencement Date.

12.2 Either Party may terminate this Agreement forthwith by giving written notice to the other Party if:-

12.2.1 the other Party commits a material breach of any of the terms of this Agreement and, if the breach is capable of remedy, fails to remedy it within thirty (30) days after being given a written notice containing full particulars of the breach and requiring it to be remedied; or

12.2.2 an order is made or a resolution is passed for the winding-up of the other Party except in the case of a voluntary winding-up for the purposes of a scheme of reconstruction or amalgamation the terms of which have previously been approved in writing by both Parties; or

12.2.3 an administration order is made, or a petition for such an order is presented, in respect of the other Party; or

12.2.4 a Receiver (or Administrative Receiver) is appointed in respect of the other Party or all or any of its assets; or

12.2.5 any voluntary arrangement is proposed under Section 1 of the Insolvency Act 1986 in respect of the other Party.

12.3 For the purposes of this Clause, a breach will be considered capable of remedy if the Party in breach can comply with the provision in question in all respects other than as to time of performance (provided always that time of performance is not of the essence).

12.4 Following expiry or the lawful termination of this Agreement, each Party will:-

12.4.1 immediately return all copies of any confidential documents provided by the other Party to that Party pursuant to this Agreement to that other Party;

12.4.2 for so long as the Patents remain in force and the Know-How remains secret and confidential, cease using the Patents, the Know-How in any manner whatsoever except that each Party or their Sublicensees may, for a period of six (6) months after the date of expiry or termination of this Agreement and subject to payment of the

appropriate royalties under Clause 6, continue to distribute and sell any unsold stocks of the Products; and

12.4.3 within thirty (30) days of the expiry of the six (6) month period referred to in Clause above 12.4.2 calculate and pay to the other Party all outstanding sums due under this Agreement up to the date of expiry or termination hereof.

12.5 The accrued rights and liabilities of the parties under this Agreement will survive expiry or termination of this Agreement.

13. NOTICE

13.1 Any notice required to be given under this Agreement will be served personally or by first class recorded delivery post addressed to the relevant Party as specified in Clause 13.2. Any notice so given will be deemed to have been served if personally delivered, on the day and at the time of delivery or if posted, forty eight (48) hours after posting and in proving service it will be sufficient to produce a copy of the notice properly addressed with the relevant post office receipt for despatch by first class recorded delivery post.

13.2 Notices to the Institution shall be addressed to the Institution at its registered office or at such other address as it may have intimated to the University for this purpose. Notices to the University shall be addressed to the Director, Technology & Research Services, Heriot-Watt University, Edinburgh, EH14 4AS, United Kingdom.

14. FORCE MAJEURE

14.1 Any delays in or failure of performance by either Party under this Agreement will not be considered a breach of this Agreement if and to the extent that such delay or failure is caused by occurrences beyond the reasonable control of that Party including, but not limited to acts of God; acts, regulations and laws of any government; strikes or other concerted acts of workers; fire; floods; explosions; riots; wars; rebellion; and sabotage; and any time for performance hereunder will be extended by the actual time of delay caused by any such occurrence.

14.2 If either Party is prevented from carrying out its obligations under this Agreement for a continuous period of six (6) months the other party may terminate this Agreement on giving thirty (30) days prior written notice provided always that at the date upon which termination becomes effective the party which was prevented from carrying out its obligations under this Agreement remains so prevented.

15. GENERAL

15.1 Save where specified otherwise under the terms of this Agreement neither Party shall be entitled to assign or transfer any of its rights or obligations under this Agreement without the prior written consent of the other Party, such consent not to be unreasonably withheld or delayed.

15.2 Nothing contained in this Agreement shall be deemed to constitute or imply any partnership, joint venture, agency, fiduciary relationship or other relationship between the Parties other than the contractual relationship expressly provided for in this Agreement. In the performance of this Agreement, the status of each Party including its employees and agents shall be that of independent contractor and not of employee, agent or fiduciary of the other party. Neither Party shall have, nor represent that it has, any authority to make any commitments on behalf of the other Party.

15.3 No failure or delay by either party in exercising any right or remedy under this Agreement shall operate as a waiver of such right or remedy nor shall any single or partial exercise or

waiver of any such right or remedy preclude its further exercise or the exercise of any other right or remedy.

15.4 This Agreement constitutes the entire understanding between the Parties with respect to the subject matter hereof and supersedes and replaces all prior agreements, understandings, representations, writings and discussions between the Parties whether written or oral in relation hereto. Nothing herein shall exclude any liability for fraudulent misrepresentation.

15.5 If any of the provisions of this Agreement are or become invalid, or are ruled illegal by any court of competent jurisdiction, or are deemed unenforceable under then current applicable law from time to time in effect during the period of this Agreement, it is the Parties' intention that the remainder of this Agreement will not be affected thereby provided that the Parties' rights under this Agreement are not materially altered. It is further the parties' intention that in lieu of each such provision which is held to be invalid, illegal or unenforceable, there will be substituted or added as part of this Agreement a valid, legal and enforceable provision which in effect will be as similar as possible to the effect of the original invalid, illegal or unenforceable provision.

16. **APPLICABLE LAW.** (§§§ - 52-53-)

16.1 This Agreement will be governed by and construed and interpreted in accordance with the laws of Scotland and the parties hereby prorogate to the exclusive jurisdiction of the Scottish Courts.

20/2/88
exclusive
jurisdiction

IN WITNESS WHEREOF these presents, consisting of this and the ten preceding pages together with the Schedule annexed hereto have been executed by the parties in duplicate as follows:-

Subscribed for and on behalf of **HERIOT-WATT UNIVERSITY** by **[REDACTED]** Authorised Signatory, at Edinburgh on the **[REDACTED]** day of **[REDACTED]** 2004 in the presence of this witness:-

Name

LEGAL SERVICES MANAGER

Title

Witness

Amanda Hearn

Full Name

AMANDA KAY HEARN

Address

4(2F-B) MOAT STREET

EDINBURGH EH1 1AL

Subscribed for and on behalf of **THE KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY** by **[REDACTED]**, Authorised Signatory, at **[REDACTED]** on the day of **[REDACTED]** 2004 in the presence of this witness:-

Name

Chief, Patent Management

Title

Witness

Park Byung Soo

Full Name

Park Byung Soo

Address

106-2206 SK Bpts Tongam-dong

Seongbuk-gu, Seoul, Korea

This is the Schedule referred to in the foregoing Patent Application and Use Agreement between Heriot-Watt University and The Korea Institute of Science and Technology.

The Inventions

Inventions concerning the fabrication of micro-diamond hollow shells. Such inventions are based upon the coating of silica spheres with a continuous diamond film using known methods including CVD. All novel methods of coating developed and owned solely by the University are for the avoidance of doubt excluded from the Inventions. Specifically included within the Inventions are novel methods developed by Professor Phillip John of the University and Doctor Jae-Kap concerning the leaving of an aperture in such diamond coating, the presence of such aperture having the purpose to allow a liquid etchant, such as hydrogen fluoride, to enter the sphere to remove the silica in order to leave a micro-diamond hollow diamond shell. The diameter of the silica 'substrates' is from nm scale up to of the order of 100 microns. The diamond coating is commensurate with the application.

The Patent Applications

No patent applications currently filed

7-13

PATENT APPLICATION AND USE AGREEMENT

between

HERIOT-WATT UNIVERSITY

and

THE KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY

7-14

Exhibit IX

출원인코드 통지서

접수번호: 4-1-2004-0041190-39

접수담당자: 주현아

서류제출자: 박장원

등록일자: 2004.10.14

출원인코드: 5-2004-036974-3

applicant code

→ applicant code notice

| 등록정보 | | 등록정보 | |
|---------|-------------------------------|--------|--|
| 한글명칭 | 해리엇-와트 유니버시티 | 영문명칭 | HERIOT-WATT UNIVERSITY |
| 법인등록번호 | 없음 | 출원인구분 | 외국법인 |
| 전화번호 | - | 우편번호 | 없음 |
| 주소(한글) | 영국 이에이치 14 40에이에스 에дин브루 리카르론 | 주소(영문) | 영국 Riccarton, Edinburgh, EH14 4AS (GB) |
| Email주소 | /> | 없음 | Department of Chemistry, |
| 핸드폰번호 | -- | 시도·국적 | GB 영국 |

특허법 제28조의 2·실용신안법 제4조·의장법 제4조·상표법 제5조의 규정에
의하여 위와 같이 출원인코드를 통지합니다.

※ 안내

: 위 출원인코드는 할후 출원서를 포함한 각종 서식에 반드시 기재하여야 합니다.

: 등록정보에 변경(경정)사항이 발생한 경우에는 별지 제4호의2 서식에 의한
출원인정보변경(경정)신고서를 제출하여야 합니다.

특허청장

관인생략

the Korea Intellectual
property Office.